AIR COMMAND AND STAFF COLLEGE

STUDENT REPORT

DEACTIVATION OF THE GROUND LAUNCHED CRUISE MISSILE TRAINING SYSTEM, 868 TACTICAL MISSILE TRAINING GROUP

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The 868 Tactical Missile Training Group was activated to conduct field and operations training for the Ground Launched Cruise Missile (GLCM) weapon system. If/when the Intermediate-range and Shorter-Range Nuclear Forces (INF) Treaty between the United States of America and the Union of Soviet Socialist Republics is ratified, this mission will no longer be required. This study addresses issues that Tactical Air Command must take into consideration regarding the reassignment, reallocation, utilization, and/or destruction of surplus training equipment. The study makes recommendations in areas of critical and non-critical vehicle uses, assignment suggestions for unit personnel and reallocation of weapons, buildings, and surplus training equipment.

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PREFACE

The purpose of this paper is to provide a recommendation to Headquarters Tactical Air Command defining procedures for deactivation of the 868th Tactical Missile Training Group, the Ground Launched Cruise Missile (GLCM) training unit at Davis-Monthan AFB, Arizona. The reference material used came from a variety of published and unpublished documents, service publications, conference minutes, unit training plans, Intermediate Range Nuclear Forces (INF) Treaty extracts, interviews, and personal experience. This document will be published as a proposal only, for issues to be considered by HQ TAC/DOTC.

The areas addressed in this paper include an overview of the INF Treaty, the disposition of GLCM unique critical vehicles, GLCM non-critical vehicles, manpower, other tactical and non-tactical equipment and existing training facilities at Davis-Monthan AFB, AZ and Fort Huachuca, AZ.

The authors would like to acknowledge the assistance received from Major Charles Rawls, HQ TAC/DOTC; Lt Col James Coleman (Ret); Major James Davidson, 868TMMS/CC; Capt Michael McDowell, 868TMTS/DOTX; Capt William Bromley AFMPC/DPMRS01; TSgt Sanders, 868 TMMS/VCO; and all the other GLCM personnel that gave us the insight and assistance to complete this project.

ABOUT THE AUTHOR

MAJOR JOSEPH M. CHIOFOLO

Major Joseph M. Chiofolo received a Bachelor of Arts Degree in History from Saint Joseph's University, Philadelphia, PA in 1975 and a Master of Science Degree in Business Administration from United States International University, San Diego, CA in 1980. Prior to attending Air Command and Staff College (ACSC) in residence, Major Chiofolo completed Squadron Officer School by correspondence and in residence, and ACSC by seminar.

He is a career missile officer having served in both Minuteman and GLCM. After receiving his commission through Reserve Officer Training Corps (ROTC), he attended Minuteman Modernized Missile Combat Crew Operational Readiness Training at Vandenberg AFB, CA in May 1975. He was assigned to the 44 Strategic Missile Wing, Ellsworth Air Force Base, SD from July 1975 to July 1979. He served as a Minuteman II Launch Officer, Wing Instructor, Squadron Command Post Commander, and Flight Commander.

In 1979, he was assigned to the 4315th Combat Crew Training Squadron, Vandenberg AFB, CA. While with the 4315 CCTS, he progressed from a Minuteman Operations Instructor to an ICBM Academic Instructor to the Minuteman ICBM Course Development Manager.

Maj Chiofolo was reassigned to the 868 Tactical Missile Training Squadron, Davis-Monthan AFB, AZ in June 1982. At the 868 TMTS, he served as a Ground Launched Cruise Missile (GLCM) Operations Instructor and Chief of Plans and Production. By 1985, the GLCM training mission had grown to the point where the 868 TMTS was reorganized into a group. Major Chiofolo was tasked to create a student administration organization and head it as Commander, 868th Student Squadron.

ABOUT THE AUTHOR

MAJOR GREGORY J. O'BRIEN

Major Gregory J. O'Brien received a Bachelor of Arts Degree in Mathematics/Education from Eastern Washington University, Cheney, WA in 1970 and a Master's Degree in Aviation Management from Embry-Riddle Aeronautical University, Daytona Beach, FL in 1986. After teaching high school mathematics, he was commissioned through Officer Training School at Lackland AFB, TX in 1975. Prior to attending ACSC in residence, Major O'Brien completed Squadron Officer School by correspondence and in residence, Academic Instructor School in residence, and Air Command and Staff College by seminar.

He has extensive missile operations experience in the Titan II and Ground Launched Cruise Missile (GLCM) weapon systems. After operational readiness training in 1975, he was assigned to the 390th Strategic Missile Wing, Davis-Monthan AFB, AZ. While at Davis-Monthan, he served as Missile Combat Crew Commander, Alternate Command Post Commander, and Stan/Eval Missile Combat Crew Commander.

In 1979 he was selected as an instructor at the United States Air Force Academy Preparatory School where he served in the Mathematics Department for two years, Head, Military Training Department, and Head, Varsity Athletics Department.

In 1983 he was assigned to the 868th Tactical Missile Training Squadron (GLCM) where he held positions as Operations Procedures Instructor; Flight Chief, Operations Procedures Training; Chief, Operations Academic Training; and Chief, Operations Training.

Major O'Brien holds the Senior Missileman Badge. Upon completion of ACSC, he will be assigned to HQ EUCOM, GE.

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EXECUTIVE SUMMARY

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TITLE DEACTIVATION OF THE GROUND LAUNCHED CRUISE MISSILE TRAINING SYSTEM, 868 TACTICAL MISSILE TRAINING GROUP

I. Purpose: To consider deactivation procedures that Tactical Air Command (TAC) must address when the mission of the 868 Tactical Missile Training Group is no longer required.

II. Problem: The 868 Tactical Missile Training Group (TMTG) is the only Air Force unit in the continental United States that conducts field and operations training for the Ground Launched Cruise Missile (GLCM) weapon system. If/when the Intermediate-range and Shorter-range Nuclear Forces Reduction (INF) Treaty is ratified by the US Senate, a problem lies in how surplus TAC GLCM training assets are to be reassigned, reallocated, utilized, disbursed, and/or destroyed.

III. Data: Assuming that the US Senate ratifies the INF Treaty between the United States and the Soviet Union, several GLCM locations outside the European theater of operations will be affected by the reduction of an entire class of tactical nuclear weapons. Of particular interest to TAC is the GLCM training unit at Davis-Monthan AFB, AZ and the dispersal training area located at Ft. Huachuca, AZ. HQ TAC will need to continue to support the GLCM training

mission for a period of at least 18 months after the treaty is ratified. The emphasis of this deactivation lies in the treatment of equipment, personnel, and building facilities that belong to TAC. To understand the complex scope of the drawdown effort, the focus of this proposal is placed on the disposition of all GLCM assets maintained by the 868 TMTG to include: TAC GLCM critical and non-critical vehicles; TAC GLCM manpower reassignment issues; other TAC GLCM equipment including buildings and training facilities.

IV. Conclusions: Redistribution of the training assets maintained by the 868 TMTG will not likely pose a problem for HQ TAC or the training group. The main emphasis should be placed on reassignment of the personnel assigned to the 868 TMTG. Since essentially all of the personnel at the 868 TMTG were hand picked for their expertise and capabilities in the GLCM weapon system, their follow-on assignments out of the GLCM weapon system should be closely monitored. The enlisted members of the group will not have difficulty transitioning into different weapon systems or locations not associated with GLCM. However, the officer force may experience some difficulty because of current overmanning in the 18XX career field. A majority of the officer force will be required to remain in the missile operations career field by moving to Minuteman or Peacekeeper to complete a four year commitment. Those who are technically qualified should be allowed to cross into other areas.

V. Recommendations: Distribute training equipment as required to meet the needs of the Air Force and perform destruction measures as required by the INF Treaty. Training buildings should be well utilized by the elements at Davis-Monthan AFB and Ft. Huachuca. Personnel should be given an assignment of choice as long as the needs of the Air Force are met. Special consideration should be given to the 1835C Flight Commander instructors as the special training they have received makes them prime candidates for joint specialties or exchange programs with the Army's Patriot Air Defense system.

Chapter One

INTRODUCTION

On December 8, 1987, the United States of America and the Union of Soviet Socialist Republics entered into a treaty for elimination of the intermediate-range and shorter-range nuclear missiles in each country. Assuming the United States Senate ratifies the Intermediate Range Nuclear Forces (INF) Treaty in the April to May 1988 time frame, complete drawdown of the weapon system will encompass a three year time table in the United States Air Forces in Europe (USAFE) theater of operations. Other locations in the continental United States (CONUS) are also affected by the provisions of the treaty. These other locations are sites that are identified as maintenance, production, storage, and training facilities.

PURPOSE

The purpose of this paper is to address specific issues pertaining to the deactivation of Tactical Air Command's (TAC) 868th Tactical Missile Training Group (TMTG) located at Davis-Monthan AFB, Tucson, Arizona, as well as the dispersed training areas at Ft. Huachuca, Sierra Vista, Arizona. The 868 TMTG is responsible for training all personnel assigned to operational Ground Launched Cruise Missile (GLCM) units at the six main operating bases in the European theater at RAF Greenham Common and RAF Molesworth, United Kingdom; Comiso AS, Italy; Wueschheim AS, Germany; Florennes AB, Belgium; and Woensdrecht AS, Netherlands. Davis-Monthan AFB, AZ is used by the 868 TMTG for technical training, operations training, emergency actions procedures training, and classroom and preparatory field training. Ft. Huachuca, AZ is used by the 868 TMTG as its primary field dispersal training site as the terrain closely resembles that of most parts of Europe in which GLCM is deployed.

PROBLEM STATEMENT

When drawdown of the GLCM weapon system begins, the 868 TMTG will continue its GLCM training mission for the first 18 months of that period. Class sizes will be reduced as USAFE units start to be taken off-line and eventual caretaker status reverts to the personnel awaiting reassignment or performing final deactivation (20:--; 26:--). When the GLCM training mission is complete, Tactical Air Command will continue to be married to a tactical missile training unit with personnel, vehicles, and equipment that are unique to a specific mission, a mission which TAC can no longer continue to support (26:12 Dec 87). The problem lies in how surplus TAC GLCM training assets (personnel, vehicles, and equipment) in CONUS are to be reassigned, reallocated, utilized, disbursed, and/or destroyed.

TREATMENT

To understand the complex scope of the drawdown effort, all existing GLCM training resources, including personnel and all materiel, were inventoried to determine recommendations for reallocation upon system deactivation. After provisions of the INF Treaty are briefly discussed for the GLCM assets contained both in USAFE and at the 868 TMTG, the focus of this proposal will be shifted to the disposition of all GLCM assets maintained by the 868 TMTG. Areas to be addressed in this paper are GLCM unique critical vehicles, TAC GLCM non-critical vehicles, TAC GLCM manpower reassignment issues, other TAC GLCM equipment, and existing/planned GLCM training facilities at Davis-Monthan AFB, AZ, and Ft. Huachuca, AZ.

This paper is written for those familiar with the terms of the GLCM missile community. For a better understanding of terms and concepts, refer to the GLOSSARY OF TERMS at Appendix B. Finally, this paper is neither comprehensive nor binding, but presents a starting point to get TAC and unit personnel thinking and planning. You are encouraged to use it as a baseline, change it to meet your own needs, and share your ideas with other units in the GLCM community.

Chapter Two

THE INF TREATY

This chapter will discuss pertinent information about the Intermediate Range Nuclear Forces (INF) Treaty as it applies to the elimination requirements for GLCM assets. The treaty calls for the elimination of all ground-launched intermediate-range and shorter-range ballistic missiles, but for the purpose of this project, only the GLCM weapon system will be addressed. As the INF Treaty inspection procedures are extremely detailed, we will only mention here that the Soviet Union retains the right to be present for the destruction of the existing missiles, canisters, launchers, and their training counterparts at the elimination facility so designated by the Air Force. There is a 13-year period after ratification of the treaty where an inspection team from the Soviet Union has the right to verify elimination destruction requirements (2:Elim.II, IV). This 'caution' will be dealt with throughout this paper.

The basic treaty provisions call for the elimination of all deployed and non-deployed ground launched cruise missiles having a range from 500 to 5500 kilometers (roughly 300 to 3400 miles), plus their launchers and designated support equipment (2:Art II.5,6). All of the intermediate-range and shorter-range missile systems are to go through a three-year phased elimination, and are banned thereafter (2:Art III-V).

ELIMINATION REQUIREMENTS

The INF Treaty identifies items of the GLCM Missile system that are subject to elimination: the missile (minus the warhead and guidance package), launch canister, and launcher. According to the elimination schedule, all intermediate range missiles (IRM), launchers and support equipment must be eliminated after 36 months after the treaty is in force (2:Art.IV). Additionally, all training missiles, training missile stages, training launch canisters, and training launchers are subject to elimination (2:Art IV.2).

The elimination protocol establishes detailed procedures for dismantling and destroying treaty-limited items. These include launch (2:Art X.5), physical destruction (2:Art X.7),

or by placing them on static display (2:Elim V.2). In addition, all training missiles, stages, launchers, and canisters may be destroyed in situ (i.e. in place). All IRMs must be removed from the deployment areas to elimination facilities in complete deployed organizational units, i.e., a BGM109-G flight (2:Art X.3).

ELIMINATION BY LAUNCH

A total of 100 IRMs may be eliminated by launching within the first six months after the treaty is entered into force and none thereafter (2:Elim III). There can be only one launch at a time at the elimination facility and the launch must involve ignition of all stages. The launch is to be used only for the explicit collection of range safety data and the missile must impact at existing impact areas only (2:Elim III).

PHYSICAL DESTRUCTION PROCEDURES

For GLCM, the airframe is to be cut longitudinally into two pieces; the wings and tail section are to be severed from the missile airframe at non-assembly joints and the front section, minus the nuclear warhead device and guidance elements, is to be crushed or flattened. The launch canister is to be crushed, flattened, cut into two near equal pieces, or destroyed by explosion. The launcher will have the erector-launcher mechanism and all launcher support equipment removed from the chassis. All components of the erector-launcher mechanism and the launcher chassis are to be cut at non-assembly joints into two near equal sizes (2:Elim II.1). Also, training missiles, stages, launchers, and launch canisters must be eliminated in accordance with standard procedures for each of the specific systems (2:Elim IV). Support structures and facilities for GLCM are not addressed by the treaty and will not be destroyed.

OTHER TYPES OF ELIMINATION

There are two other methods of elimination that can be applied to the GLCM weapon system. The first would come as a result of either loss or accidental destruction (2:Elim V.1). This obviously requires notification, related circumstances, and inspection verification. The second alternate method of elimination is that the US and the Soviets are allowed to place 15 inoperative missiles, launch canisters, and launchers on static display (2:Elim V.2).

VERIFICATION OBLIGATIONS

While the United States will continue to use its national technical means as the principle method of monitoring the treaty, another important means to assist in verification is through the unprecedented on-site inspection rights established by the treaty (1:3). This, of course, will be controlled by the US State Department and the Department of Defense.

Chapter Three

CRITICAL VEHICLES DISPOSITION

Critical vehicles are designated as the Launch Control Center (LCC) and the Transporter Erector Launcher (TEL). Data provided by the INF Treaty indicates that Davis-Monthan AFB training facility houses no missiles, no launch canisters, seven launchers, two training missiles, and 27 training launch canisters. The Ft. Huachuca training facility houses no missiles, no launch canisters, six launchers, no training missiles, and eight training launch canisters (2:MOU.43).

LAUNCH CONTROL CENTER

The LCC is the heart of the GLCM weapon system. The LCC shelters the command, control, and communications systems and the Weapons Control System (WCS). The WCS comprises the equipment and software to provide status monitoring, launch preparations, and launch execution of the missiles. The LCCs are connected to the TELs by fiber optic data links. Each LCC contains a 400 Hz diesel turbine powered electrical generator and an Environmental Control System (7:Ch 1). Each LCC is pulled by the M.A.N. prime mover.

The INF Treaty does not require destruction of the LCC. With the off-the-shelf government furnished equipment in the LCC (i.e., HF, VHF, UHF SATCOM, environmental control, and power generation subsystems) the most cost effective recovery of the equipment is to remove the GLCM unique equipment (WCS only) and retain the communications equipment and other subsystems intact for conversion to Tactical Mobile Communication Centers. Once the LCC is converted to an armored communications and control van, there is an urgent need for this equipment in both USAFE and PACAF (24:--). The tactical qualities of this van have been demonstrated in the field and adds credence to its use as a field command and control communications van or a control center for proposed aircraft lateral dispersal (26:26 Jan 88).

TRANSPORTER ERECTOR LAUNCHER

The TEL is the mobile launch platform for the GLCM weapon system. It is an air transportable drop-deck semi-trailer with an armored erectible launch platform. Each TEL carries four All-Up-Rounds (AUR); i.e., missiles, in its launch tubes. There are four TELs in a GLCM flight that are connected to the LCC by fiber optic cables. The principal parts of the TEL are an armored erector launcher that elevates the missiles for launch and an armored forward equipment box on the goose neck portion of the trailer which contains the WCS. This is the dedicated equipment that enables control over the prepare-to-launch and launch sequences of the TEL and missile. The forward equipment box also contains a 400 Hz diesel turbine powered electric generator. Each TEL is moved about in the field by the M.A.N. tractor prime mover (7:Ch 1).

The INF Treaty requires destruction of all TELs and the TEL mock-up vehicles designated as Driver Training Vehicles (DTV). Destruction of all 868 TMTG assets at the Davis-Monthan AFB elimination site is required in accordance with the INF Treaty and we recommend the scrap be sold through AFLC's Military Aerospace Maintenance and Regeneration Center (AMARC).

Chapter Four

NON-CRITICAL VEHICLES DISPOSITION

The 868 TMTG operates one of the largest vehicle fleets in TAC with over 280 vehicles and trailers (21:--; 10:--). In this chapter, we will recommend the disposition of these non-critical vehicles. Appendix C contains a listing of these vehicles by quantity and type.

After GLCM has been eliminated, the only mission remaining for the 868 TMTG will be instructing the Tactical Air Control System (TACS) course (25:--; 17:--). Numerous non-critical vehicles must remain with the 868 TMTG to support the new TACS training mission (14:--; 17:--). Capt Roy Avery, the TACS course developer at the 868 TMTG provided current estimates of the number of vehicles the TACS training mission will require. These figures are listed in the third column on Appendix C entitled "TACS." The actual figures will be more clearly defined once the course is fully developed and the student load has been determined.

We propose that the remainder of the GLCM training fleet be declared surplus and redistributed as follows: First, fill back orders for the specified vehicle or as an equivalent substitute to TAC units needing vehicles. This redistribution should first be directed to the units at Davis-Monthan AFB to minimize shipping costs and then to other TAC units, such as the 607 Tactical Control Training Squadron (TCTS) at Luke AFB. Second, TAC should fill vacancies in the Air National Guard units that have had vehicle back orders for a considerable amount of time (14:--). Third, TAC should either release the remainder of the vehicles to the Air Logistic Center (ALC) item managers at Robins AFB, GA for general distribution within the Air Force or turn them in to the War Reserve Material (WRM) fleet (14:--).

The INF Treaty does not require the destruction of any of the following categories of non-critical vehicles. They should be re-entered into the general Air Force motor pool system and reassigned to other field units as required.

M.A.N. VEHICLES

The M.A.N. tractor is manufactured by the M.A.N. (Maschinenfabrik Augsburg Nurnberg) Corporation of West Germany. The 868 TMTG has an inventory of 34 M.A.N. tractors, including the recovery vehicle (10:--). The M.A.N. is the prime mover for the LCC and TEL trailers. It is capable of operating on over 80% of the all road terrain in the GLCM theater of operations. There are seven M.A.N. vehicles in each GLCM flight to pull each of the two LCCs and four TELs. The seventh M.A.N. is configured with a fifth wheel recovery kit to tow any disabled vehicles. With the elimination of GLCM, TAC has no other use for 34 M.A.N. vehicles at Davis-Monthan AFB (26:--). We recommend that HQ TAC/LGT offer all the M.A.N. vehicles in CONUS to USAFE as an in-theater heavy load vehicle. In CONUS, the M.A.N. has had a history of expensive repairs and support due to its European design and parts requirements (27:--). As a West German manufactured vehicle, maintenance support is far superior in Europe than it is state-side (17:--). In the event USAFE does not want these M.A.N. vehicles, they could be turned over to the Army Automotive Tank Command in Warren, MI to be reallocated along with the M.A.N. vehicles that will become available with the Pershing II system deactivation.

Cargo Trucks

The M-925 cargo truck is used to resupply the GLCM flight under field conditions. It is used to transport up to 20,000 pounds of fuel, food, ammunition, and other supplies. Fully loaded, it can tow a variety of trailers on roadways or cross country. The M-925 is equipped with a front winch to make it more versatile under field conditions. The M-923 is the same vehicle only without the winch. The M-813 is an older model 5 ton cargo truck and the M-35 is a smaller 2.5 ton cargo truck. Both are used as substitutes for the M-925/923. Of the 25 M-925/923, six M-813 and four M-35 cargo trucks currently in the Davis-Monthan GLCM fleet, six M-925s and four M-35s will be required to support the TACS training mission (23:--; 25:--). The M-[illegible] currently the primary cargo truck for TACS units and [illegible]mber of M-35s may eventually have to increased as [illegible]student load increases. The remainder could be [illegible]sets to any TAC field unit.

Security Police Vehicles

The High Mobility Multiple Wheel Vehicle (HMMWV) or M-1026 is used by the GLCM Defense Force members. The 868 TMTG has 57 HMMWVs in its inventory. Like the European missions the 868 TMTG is training for, it usually deploys ten HMMWVs dedicated to each GLCM flight in the field. The HMMWV, with it's low center of gravity, can climb 60% grades fully loaded, traverse a 40% slide slope and cross streams up to 30 inches deep without any adaptation (27:--). It provides mounting for various weapons such as the M-60 machine gun and Mark 19 grenade launcher to provide a 360 degree firing arc. At the same time it provides armored protection to the defense force crew. Only four of these HMMWVs need be retained at the 868 TMTG (23:--). The remaining 53 HMMWVs should make highly prized assets for any security police organizations responsible for base security at locations with rough terrain. If HQ TAC/LG can not use all 53 HMMWVs state-side, they are ideally suited for Air Base Ground Defense missions overseas (27:--).

Trailers

The 868 TMTG has a large inventory of assorted trailers to facilitate deployment and resupply of the GLCM flights. This inventory of six types of trailers consists of: 17 M-105 2.5 ton cargo trailers; 12 M-149 water trailers; six M-353 Hollingsworth Generator trailers; one A1B fuel trailer; five M-101, 1.5 ton communication trailers; and 38 M-416, half-ton trailers. The 868 TMTG primarily uses the M-105, 2.5 ton cargo trailers to supplement the M-925 cargo trucks in the movement of cargo for each GLCM flight. Of the 17 M-105 trailers in the inventory, only five need to be retained for the TACS mission. The M-149 water trailers are a must for TACS training in the hot desert environment at Davis-Monthan AFB. TACS should require four of the 12 M-149 water trailers. The M-353 Hollingsworth Generator trailer is used to provide power at the dispersed site. After GLCM deactivation, only three of the six M-353s in the 868 TMTG inventory will be needed for training. The TACS training mission will also require the A1B fuel trailer for remote refueling in the field. The five M-101, 1.5 ton communication trailers and 38 M-416, half-ton security police trailers will probably not be used by TACS. The surplus trailers listed above could be distributed first to needing units within TAC starting at Davis-Monthan AFB, second to needing units in the Air National Guard, and then third released to ALC for general distribution within the Air Force (14:--). The M-416 is not commonly found in most Air Force

units (14:--). If ALC can not find a place for the M-416s within the Air Force, they should be turned over to the Army Automotive Tank Command in Warren, MI.

Blazers

There are two types of Blazers used in GLCM training. The M-1009 Crew Utility Cargo Vehicle (CUCV) Blazer and the Communications Relay Blazer, which is a modified M-1009 with GLCM communications gear installed in the cargo space. As the Communications Blazers are already equipped for field communications relay use, HQ TAC should turn them over to communications units rather than stripping them down to a basic Blazer. The eight Communications Blazers could be redistributed beginning with the 1903 Communications Squadron at Davis-Monthan AFB. Twelve of the 34 CUCVs should be retained by TACS for its training mission (25:--). The 868 TMTG also has two CUCV, M-1008 pickups. These pickups and excess CUCV Blazers should be declared surplus and redistributed by HQ TAC/LGT.

Miscellaneous Vehicles

The 868th also has an assortment of vehicles ranging from a standard staff car to a 15-ton forklift. The only miscellaneous vehicles that the TACS mission may require are the two Suburban carry-alls. All of the vehicles that need to be retained for TACS training are listed in Appendix C, column three. All surplus vehicles should be distributed to other TAC units that have specific requirements or they should be returned to ALC for general distribution throughout the Air Force.

Chapter Five

MANPOWER REALLOCATION

In this chapter we will recommend possible reallocation for the manpower stationed at the 868 Tactical Missile Training Group. The manpower strength shown in Appendix D (61 officers, 246 enlisted and six civilians), is based upon the unit manning documents (6:--). For the purpose of this study we focused on authorizations. We examined all of the billets and divided the enlisted personnel into two basic categories. Hardline GLCM Air Force Specialty Codes (AFSC) are those AFSCs required for a flight to disperse in a field environment. Non-hardline AFSCs are the other specialties that support the training mission, but do not disperse with the GLCM flight.

This study is concerned mainly with the manpower at the 868 TMTG. However, we could not ignore the large number of USAFE personnel in the GLCM weapon system that will be competing for the same assignments as those 868 TMTG personnel. For the focus of our project, we concentrated on the GLCM hardline positions at the 868 TMTG and did a comparison to the USAFE hardline AFSC numbers. We ignored assorted GLCM positions such as the three officer and two enlisted GLCM slots at HQ TAC, Langley AFB, VA and the one officer GLCM slot at HQ 12 AF, Bergstrom AFB, TX. Those miscellaneous positions do not significantly alter the overall estimates for each GLCM AFSC. To arrive at an estimated figure for each hardline AFSC, we took the actual number of 868 TMTG graduates from the past three fiscal years (one tour length) and calculated the known attrition and no-show rate (see explanation at Appendix E), against the projected TAC Programed Missile Training (PMT) requirement numbers. We assumed the attrition/no-show rate for each hardline AFSC over the past three years would remain constant throughout the next eighteen months while the drawdown takes place (15:--; 20:--). From this calculation we projected the estimated number of personnel in USAFE that will have to be reall -ated. We then added the actual number of authorized slots t the 868 TMTG for the approximate number of slots each ' C must have reallocated and/or reassigned.

TACS MISSION

Prior to the INF Treaty, the 868 TMTG was chartered to teach field living and survival combat skills to USAFE GLCM personnel. Once GLCM has been eliminated, the only mission remaining at the 868 TMTG will be that of teaching the Tactical Air Control System (TACS) course. The course is scheduled to begin in December 1988 and will eventually take over the remaining 868 TMTG assets (25:--, 26:--). Students in this course will already have completed the technical requirements for their mission and are at Davis-Monthan AFB for an introduction to mobility and basic field skills training. The TACS course will be 20 days long and will initially be taught 10 to 12 times a year. About 150 students will be taught in FY 89 with about 15 students per class. The number of classes per year will increase and overlap as the annual student load approaches 600 in the early 1990s (25:--). The instructors may be drawn from any one of 26 AFSCs. In order to retain the current experience level, we recommend the initial TACS instructor cadre be drawn from current field experienced GLCM instructors. The student-instructor ratio under field conditions should be 3 to 1 to optimize training. We suggest the initial field qualified instructor cadre consist of one TACS officer - 17XX or 1835C Flight Commander Instructor, three TACS communications technicians - 304XX, two vehicle technicians -472XX, two aerospace ground equipment technicians - 423XX, and three security police - 811XX. Eventually, the instructor force will shift to the same AFSCs as the primary target student population: Air Director Weapons Officer -17XX and Weapons Director Technicians - 276XX (15:--; 17:--). In addition to the instructors, TACS should require a unit commander - A17XX, a first sergeant - 10099, three supply technicians - 645XX, one Instructional System Development (ISD) technician - 751XX, one 702XX administrative specialist, one 732XX student personnel specialist and one 902XX Independent Duty Medical Technician. The remainder of the 868 TMTG personnel (60 officers, 228 enlisted and six civilians), will have to be reassigned. The non-hardline GLCM AFSCs listed in Appendix E should be absorbed back into their primary career fields. First consideration should be given to units at Davis-Monthan AFB to save on PCS expenses.

Once the 868 TMTG draws down to the TACS training mission, it should be redesignated as the 868th Tactical Training Squadron (TTS). It is also logical to assign the 868 TTS to the 602nd Tactical Air Control Wing which already has a TACS mission.

Officer Personnel

The most difficult AFSC for which to predict redistribution is the 18XX, Missile Operations. Appendix E depicts there are about 484 Missile Operations officers leaving GLCM (18:--). The most logical place to reassign these officers is to the SAC missile crew force, SAC staff, and ICBM staff. However, the SAC missile crew force is currently overmanned by 71 slots (18:--). We propose the following solution. It is estimated that about 30% of the GLCM launch crews or about 150 officers will have less than three years on crew by the time their positions are phased out. These lieutenants and junior captains should be retrained as SAC missile launch officers to complete a combination of four years crew time between the two missile systems. This will require a decrease in new second lieutenant accessions coming into the missile career field (18:--). However, the new accession pipeline must not be turned off altogether. Secondly, over the next three years, about 100 of the most talented and experienced GLCM officers should be reassigned to HQ SAC staff, the ICBM positions at Air Staff, test and evaluation teams, etc., regardless of weapon system familiarity (19:--). Additionally, any GLCM officers with technical degrees are prime candidates for and should be allowed to move to the 21XX (Space Operations), 26XX (Scientific), 27XX (Acquisition Program Management), and 28XX (Development Engineer) career fields (18:26 Jan 88). Also over the next three years, the non-rated operations career field (19XX) will grow by about 400 slots (20:--). This career field deals with command and control and air field management. The remaining 230 GLCM officers could be retrained as 19XXs. In addition, there are always individual cases for career broadening or cross training into additional career fields outside of missiles. Of special interest are those 1835C Missile Staff officers that have been specifically trained as GLCM Flight Commanders and Flight Commander Instructors. We propose, that to take advantage of the special training they have received, these officers be given priority opportunities for joint specialties or exchange programs with the Army's Patriot Air Defense weapon system.

Enlisted Personnel

For the enlisted GLCM hardline personnel, the same approach should be used as with the non-hardline GLCM AFSCs, except for the 411XX AFSC, Missile Maintenance. Both in USAFE and at Davis-Monthan AFB, personnel in those AFSCs not unique to GLCM should be reassigned (PCA) to a unit at the host base. For example, to the maximum extent possible, all

surplus communications maintenance technicians (304XX) at Davis-Monthan AFB, not absorbed by TACS should PCA to the 1903 Communications Squadron. The 472XXs, Vehicle Maintainers, would go to the base motor pool, the 811XXs, Security Police, would go to the Security Police Squadron, etc. Only after the local base requirements are met, should the remaining enlisted personnel be sent PCS. For USAFE, the best course of action is to consider consecutive overseas tours (COT) for the most experienced GLCM personnel (15:--).

The Missile Systems Analysts, 411X0s, and Missile Technicians, 411X1s, are unique. Like the missile launch officers, they cannot PCA to another unit on Davis-Monthan AFB without cross training out of their career field. They will probably be required to stay at Davis-Monthan AFB to destroy the training TELs and training missiles in accordance with the INF Treaty. Some of the 411XXs can PCS from the instructor staff as the training requirements decrease (28:--). Once the training TELs and required equipment have been destroyed, HQ TAC/DP should declare the 411XXs as surplus. The 411X0s and the 411X1s can go PCS directly into the space launch maintenance program, into the Peacekeeper ICBM weapon system as 411X0As or 411X1As or retrained into a new career field. Only the 411X0s can retrain into the Air Launched Cruise Missile (ALCM) (28:--).

Chapter Six

TRAINING EQUIPMENT DISPOSITION

In this chapter we will discuss our proposal for the disposition of the training simulators, Driver Training Vehicles (DTVs), small arms, and dispersal equipment.

MISSILE PROCEDURES TRAINERS

The 868 TMTS utilizes three Missile Procedures Trainers (MPT) to develop the proficiency of the GLCM launch officers. Each MPT consists of two major components of equipment: the Launch Control Trainer (LCT) student half of the MPT, and the Instructor Control Unit (ICU). We suggest that several items of training equipment can be combined to produce armored mobile communications command and control vans just like the LCC. The LCT half of the MPT is an actual demounted LCC. Like the LCC, the INF Treaty does not require destruction of the MPTs. After removing the WCS equipment, we recommend the LCTs be mounted on the chassis of a Driver Training Vehicle LCC, known as a DTV LCC. NOTE: The DTV LCC is a "mock shell" of an LCC and functions only as a driver's training vehicle. In order to mount the LCT and associated equipment on the chassis of the DTV LCC it must undergo and pass a load bearing stress test (24:--).

The 512 FTD GLCM technical training school, adjacent to the 868 TMTG, possesses an Environmental Support System Trainer (ESST) and Power Unit Trainer (PUT). Both of these training items can be converted to operational status with relative ease and could be mounted onto the DTV LCC chassis. Thus, a mobile communications command and control van can be constructed from the resources on hand. The other two LCTs and the three Instructor Control Units (ICUs) from the MPTs could also be mounted on DTV LCC chassis and converted into operational mobile communications command and control vans. The three mobile communications command and control vans reconstructed from the ICUs, however, would not have the armor plating protection like the vans built from the LCTs or regular LCCs. For this reason, these three centers would be best suited for operations in rear areas. The additional environmental control systems and power units

will have to be purchased if there are no units currently in the supply system. Most of this equipment is already available as off-the-shelf technology. These Mobile Command and Control Centers could be built relatively inexpensively compared to the original cost of $7.5 million for a new LCC (26:--).

OTHER GLCM TRAINERS

The 868 TMTG possesses two training missiles, eight Driver Training Vehicle TELs (DTV TELs), and 35 missile mass simulators (canister trainers). All of this training equipment must be destroyed IAW the INF Treaty (2:Elim IV.3).

The DTV LCCs do not have to be destroyed. The "mock shell" should be removed and scrapped. The chassis should be used to mount the LCT or ICU salvaged from the MPTs as mentioned above.

Other GLCM training equipment such as the two Part-Task Trainers, the Mark 438 voltage test kits, Emergency Ordnance Disposal Trainer, Code Disable Units, etc., are not required to be destroyed but they no longer serve any practical function for the 868 TMTG. Therefore, it is recommended that they be turned in for salvage.

SMALL ARMS

The 868 TMTG GLCM training mission required a small arsenal as listed in Appendix F. Of these weapons, TACS will require 50 M-16A2 rifles with M-16 Multiple Integrated Laser Engagement System (MILES) equipment and two M-15 .38 caliber Revolvers. The remaining 390 M-16A2s, 25 M-60 machine guns, 20 GAU 5A submachine guns, and four M-15 revolvers along with the remaining 150 sets of M-16 Miles and 20 sets of M-60 MILES should be turned in to 836 Security Police Squadron armory (11:--). HQ TAC/SP can redistribute the excess weapons to other TAC units.

DISPERSAL EQUIPMENT

Dispersal equipment falls into two categories: individual equipment issued to each GLCM trainee and field equipment for general use in a dispersed flight. Appendix G lists all of the current individual equipment managed by the 868 TMTS. This on-hand inventory is used to support 300 GLCM students and instructors during the field phase of GLCM training. We

have added a suggested column of equipment on the right hand side of this appendix. These figures are estimates based upon our extensive GLCM field experience and what the TACS mission will be required to support with 30 students and 10 to 15 instructors and staff. Appendix G also lists the current 868 TMTS dispersal field equipment inventory. This inventory is used to support three GLCM flights. We estimated the TACS requirements for supporting two 15-man overlapping classes in the right hand column. The surplus equipment listed should be turned in to base supply for re-issue.

Chapter Seven

FACILITIES AND LAND DISPOSITION

GLCM BUILDINGS

All of the buildings used for GLCM training are subject to on-site Soviet inspection for 13 years starting 30 days after ratification of the INF Treaty (2:Art XI.8). Section II, paragraph 2 of the Treaty's Elimination Protocol requires an inspection team be notified no less than 30 days in advance to verify the destruction of training missiles, training canisters, and training launchers. For the 868th TMTG facilities, a Soviet inspection team will probably be present during the actual destruction of the affected training equipment, but there are no guarantees that a Soviet team will not return at any other time during the 13-year verification period. Section IV, paragraph 1(b) of the Protocol Regarding Inspections Relating to the Treaty applies to inspection teams verifying the elimination of training missiles, training canisters, and training launchers. This section states that no less than 72 hours advance notification must be given prior to the arrival into the country of such an inspection team. While this should provide adequate time to secure any classified or sensitive material that a follow-on mission might have, this fact must be kept in mind for future uses of these buildings.

Building 70 is the primary building for the 868th Tactical Missile Training Group (TMTG). This 38,700 square foot structure contains classrooms and offices for conducting the group's training mission. There is a controlled entry area consisting of six TEMPEST cleared offices (one with an adjoining vault), a large MPT bay housing three Missile Procedure Trainers (MPTs), and three TEMPEST secure classrooms that are cleared for classified instruction. The non-secure portions of Building 70 consist of 34 offices and classrooms on two floors, including a secure mini-theater with projection room, and a command section. The North ramp of the flight line is adjacent to the south side of the building (23:--).

Building 70 could easily be adapted to a variety of missions at Davis-Monthan AFB. Among these is the relocation of the Headquarters, 836th Air Division currently housed in the aging building S-1. Built in FY 1982, Building 70's close proximity to the flight line and easy access to both the base proper and the main entry gate to the base make this an ideal location. The existing command section, large offices and existing classrooms, and the mini-theater are ideally suited for the command functions, protocol, and public relations missions for which the present air division headquarters building currently has responsibility. A follow-on mission for the 868 TMTG, training for the Tactical Air Control System (TACS) course (26:--; 13:--) could continue to be taught in some of the classrooms. Other training functions could continue within this building adjacent to the flight line by either the 355 TFW or the 602 Tactical Air Control Wing (TAIRCW). The secure area, with its large vault, is custom designed for classified training. The MPT bay is large enough to accommodate one or more flight simulators. The 72 hour advance notification requirement prior to the arrival in country of a Soviet inspection team should provide ample time for any follow-on users of Building 70 to secure or remove sensitive and classified information.

Building 72 houses the 868th Tactical Missile Maintenance Squadron (TMMS). It consist of 17,300 square feet of offices, maintenance shops, and vehicle work areas and a 10,300 square foot, large vehicle maintenance high bay. Within the high bay is a modular, two story office structure. Adjacent to the east and north is a large, fenced vehicle yard containing small hazardous storage buildings, a paint storage building (Building 71), and a vehicle service rack and paint building (Building 73). Like Building 70, the North ramp of the flight line is adjacent to the south side of Building 72 (23:--).

Building 72 is ideally suited for vehicle maintenance. Possible uses include servicing motor pool flight line vehicles or use as an Aerospace Ground Equipment (AGE) storage and repair facility for equipment used on the flight line. Another possible use for building 72 is that of a small helicopter hanger. The existing vehicle doors are high enough, but not wide enough, for small aircraft. However, with the blades folded back or properly positioned, it should be able to accommodate most smaller helicopters.

Building 74 was constructed for the ATC technical training mission teaching enlisted GLCM missile maintenance personnel. It was completed in Sept 87 and turned over to the 512 Field Training Detachment (FTD). Although Building

74 is not a TAC asset, it is addressed by the treaty and it's mission is too closely related to the GLCM mission to be ignored. This building, like Building 72, has a high bay adjacent to the North ramp area of the flight line. The remainder of the building north of the high bay consists of offices and classrooms. Building 74 was designed to house GLCM training vehicles and equipment in its high bay. GLCM students were to learn classroom and hands-on technical skills prior to applying these skills under field conditions in the 868 TMTG course. It is situated just west of Building 70 to facilitate mutual support between the two schools (23:--). As with Buildings 70 and 72, the north ramp flight line area abuts the south end of this building. Like the high bay area of Building 70, Building 74's high bay could be used as a small helicopter hanger or house flight simulators or flight line equipment. Its classrooms could be used for office space and/or an extension of the TACS training mission in Building 70. After the GLCM drawdown is complete, another possible option is to keep Building 74 as the 512 FTD training center assigned to ATC but use it for A-10 technical training or for the new 355 TFW mission with the OA-10.

Building 75 was still under construction as of January 1988. It was designed to be a 12,500 square foot armory and dispersal training center. Its main components are a 1200 square foot armory with numerous rapid issue windows for weapons disbursement, an adjacent issue/cleaning classroom, several offices, and a covered outside assembly area. At the west end of the facility is a 4800 square foot warehouse and a secure storage area. It's west doors are large enough to allow a rapid and continual flow of trucks to be uploaded or downloaded for dispersal operations (23:--).

Building 75 is our first choice to house the 868 TMTG follow-on TACS mission. Training could continue to take place in its classrooms and there is adequate space for the storage and issue of field equipment. Building 75 is also ideally suited for a mobility processing center for rapid assembly and deployment of troops. Designed for rapid GLCM dispersal, the conversion to a mobility center would be very easy. Unit mobility bags and equipment could be pre-packaged and orderly stored by unit in the warehouse and, when required, rapidly distributed to the user. The east, or armory side of the building could be used to rapidly issue weapons to troops requiring them for mobility deployments. It could easily be used to augment or even replace the base security police armory on a day-to-day basis. Building 75 is just north of ATC Building 74 and they share the parking lot and a small paint storage building designated as Building 76. Building 75 is within 100 yards of the north ramp flight line

area. This close proximity to the flight line would allow C-130s and C-141s to park very close to the assembly and issue points, further facilitating a rapid and effective mobilization and deployment concept.

Building 4430 is located in the center of Davis-Monthan AFB proper and was previously used as the old 390 SMW Titan II Emergency Actions training center. It's 9,799 square feet consists of a 26' X 33' vault now being used as an armory until building 75 is complete. Two large classrooms and two small classrooms, along with three offices are contained in this building (23:--). Before the GLCM mission expanded, this building was slated to become the base library. As the base library is currently housed in a large trailer facility, this option could be considered as a permanent site for the base library. As a general office/classroom building with a secure vault, there are a wide variety of missions, both classified and unclassified, that this building could facilitate. Although there is no GLCM training equipment contained within this building, it is also subject to 13 years of possible Soviet inspection. The 72 hour advance notice should provide adequate time to secure any classified material.

Building 1540 is an 11,650 square foot hangar adjacent to the main flight line and is used as the dispersal materiel storage center and for heavy M.A.N. tractor maintenance. Once Building 75 is complete, the dispersal storage center will be cleared out leaving only the heavy maintenance function in the M.A.N. Service Center (23:--). This function can be moved to Building 72 as the GLCM training mission is reduced during the phase down period. The Tactical Air Weapons Center (TAWC) DET 2 test team should be deactivated after the treaty is ratified and their office space in Building 1540 turned over to the 1903 Communications Squadron.

DRIVERS TRAINING AREA

Site 93901 - The GLCM drivers training area just west of the Swan Gate should remain intact and be used as a Prime Beef rapid road repair training area and an off-road driver's course for security police personnel (23:--).

DISPERSAL FACILITIES

The GLCM dispersal training area, consisting of 1867 acres along the eastern perimeter of Davis-Monthan AFB should be turned over for the exclusive use of the Small Arms Range

and Explosives Ordinance Disposal.

Two GLCM buildings at Ft Huachuca, AZ are used as a re-supply center, VIP camp, and command post during the dispersal phase of GLCM training. One of these buildings should be retained by the 868 TMTG to operate field TACS training. The other building should be turned over to the Department of the Army.

BILLETING

Dormitory Buildings 3510, 3511, and 4210 have been used by the 836 Services Squadron to house approximately 400 GLCM enlisted students. Officer and female students have been housed in Buildings 2350 and 2550. By mid-1989, the GLCM student flow should come to a complete stop. Openings created in Buildings 2350 and 2550 will continue to be used for day-to-day billeting, and even ease the requirements for contract quarters. Billeting should be able to accommodate the 15 to 30 TACS students per class in these facilities. As Buildings 3510, 3511, and 4210 become vacant by the diminishing class loads, they should be refurbished and converted to permanent party dormitories (12: --).

Chapter Eight

CONCLUSION

The GLCM weapon system was fielded in 1983 to satisfy a dual track purpose. First, it countered the growing Soviet nuclear threat to Western Europe. The intermediate ranged non-strategic nuclear forces (INF), composed of the Pershing II and GLCM, reestablished the balance that was jeopardized, in particular, by the mobile SS-20 weapon system. Second, it was offered as a bargaining chip to bring the Soviets to the negotiating table and enact a treaty to reduce the number of nuclear warheads in the European Theater of Operations. GLCM helped achieve both of these objectives. It provided an economical, difficult to defend against, accurate threat to the Soviet homeland that, from time of conception to Initial Operational Capability (IOC), was developed and fielded in near-record time. Once operational, the Soviets realized their vulnerability and inability to counter the GLCM weapon system. In 1987, they endorsed an agreement to eliminate the intermediate-ranged weapon systems that in 1982 they had rejected. The big difference in those five years for the Soviets was NATO solidarity through actual deployment.

The big factors that made GLCM so successful were the extremely well trained GLCM crew members, maintenance, and security personnel. The credit for this excellent training belongs to the men and women of the 868 TMTG. This paper proposes several aspects to consider in deactivating the 868 TMTG when the INF Treaty goes into effect. We discussed the impact the INF Treaty will have on this organization. Requirements of elimination were specifically addressed, such as destruction of the critical Transporter Erector Launcher (TEL) vehicles and the All-Up-Round (AUR). We proposed viable options for the Launch Control Center (LCC) along with the other non-critical vehicles and training equipment, and the economical transfer of these assets to other Air Force roles and missions. We proposed how to best utilize the available manpower specialties during the weapon system elimination phase and draw-down of the GLCM training mission. We offered recommendations to logically redistribute the 868 TMTG manpower in a way that will minimize the loss of valuable GLCM training and experience, and at the same time, enhance career progression of one of the finest group of officers and enlisted professionals we have had the pleasure of working with.

Also addressed were the problems of reusing existing GLCM facilities. These buildings were designed to meet the needs of GLCM unique training. The transition to other missions is easier for the general use classrooms and offices than the GLCM maintenance high bays and vehicle bays. Although not ideal, we offered suggestions to practically utilize these facilities by taking into consideration their size, proximity to the flight line, floor plans, and locations on the base itself. Building use carries a particular caveat in that these facilities are subject to on-site inspections by the Soviets for 13 years following INF Treaty ratification.

As stated in the preface, our purpose is to provide Headquarters Tactical Air Command with procedures to deactivate the 868th Tactical Missile Training Group's GLCM training mission. We hope this will cultivate other ideas facilitating the draw down of GLCM in Europe, while maximizing the residual benefits the Air Force has gained in fielding this weapon system. Hopefully, our recommendations will not be limited to just HQ TAC. Ideally, the procedures implemented at the 868 TMTG will cross the Atlantic and stimulate a resourceful draw down of USAFE's units as well.

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APPENDICES

APPENDIX A

LIST OF ACRONYMS

AFSC -- Air Force Specialty Code

AGE -- Aerospace Ground Equipment

AMARC -- Aerospace Maintenance and Regeneration Center

ATC -- Air Training Command

AUR -- All-Up-Round

CBR -- Chemical, Biological, Radiological

CDU -- Code Disable Unit

CUCV -- Crew Utility Cargo Vehicle

COT -- Consecutive Overseas Tour

CONUS -- Continental United States

DET -- Detachment

DTV -- Driver's Training Vehicle

EAP -- Emergency Action Procedures

EOD -- Explosives Ordnance Disposal

FTD -- Field Training Detachment

ESST -- Environmental Support Systems Trainer

ECS -- Environmental Control System

GLBM -- Ground Launched Ballistic Missile

GLCM -- Ground Launched Cruise Missile

HF -- High Frequency (Radio)

HMMWV -- High Mobility Multi- Wheeled Vehicle

ICBM -- Intercontinental Ballistic Missile

CONTINUED

ICU -- Instructor Control Unit

IOC -- Initial Operational Capability

IRBM -- Intermediate Range Ballistic Missile

IRM -- Intermediate Range Missile

LCC -- Launch Control Center

LCT -- Launch Control Trainer

MILES -- Multiple Integrated Laser Engagement System

MAN -- Maschinenfabrik Augsburg Nurnberg

MOB -- Main Operating Base

MPT -- Missile Procedures Trainer

NATO -- North Atlantic Treaty Organization

ODEP -- Operator Display and Entry Panel

PEWS -- Platoon Early Warning System

PUT -- Power Unit Trainer

SAC -- Strategic Air Command

SATCOM -- Satellite Communications

TAC -- Tactical Air Command

TACS -- Tactical Air Control System

TAIRCW -- Tactical Air Control Wing

TAWC -- Tactical Air Weapons Center

TAF -- Tactical Air Forces

TEL -- Transporter Erector Launcher

TFW -- Tactical Fighter Wing

TMMS -- Tactical Missile Maintenance Squadron

TMTG -- Tactical Missile Training Group

CONTINUED

TMTS -- Tactical Missile Training Squadron

TTS -- Tactical Training Squadron

UHF -- Ultra High Frequency

USAFE -- United States Air Forces in Europe

VHF -- Very High Frequency

WCS -- Weapons Control System

WCST -- Weapons Control System Trainer

APPENDIX B

GLOSSARY OF TERMS

BGM-109G: Missile, launch canister and launcher.

CRUISE MISSILE: An unmanned, self-propelled vehicle that sustains flight through the use of aerodynamic lift over most of its flight path.

DEPLOYED MISSILE/LAUNCHER: An IRM/launcher located within a deployment area.

DEPLOYMENT AREA: Designated operating areas for IRMs and their launchers.

GROUND LAUNCHED CRUISE MISSILE: A ground launched cruise missile that is a weapon delivery system.

HMMWV: The High Mobility Multiple Wheel Vehicle or M-1026 is used by the GLCM Defense Force Members. There are usually ten HMMWVs dedicated to each GLCM flight in the field. The HMMWV can climb 60% grades fully loaded, transverse a 40% slide slope, and cross streams up to 30 inches deep without any adaptation. It provides mounting for various weapons such as the M-60 machine gun and Mark 19 grenade launcher with a 360 degree firing arc and at the same time provides armor
protection for the defense force crew.

INTERMEDIATE-RANGE MISSILE (IRM): A ground launched cruise missile having a range capability in excess of 1000km but not in excess of 5500km (approximately 300 to 3400 miles).

LAUNCHER (GLCM): A fixed launcher or a mobile transporter-erector-launcher mechanism for launching a GLCM.

MISSILE OPERATING BASE (MOB): A complex of facilities within a deployment area at which IRMs and their launchers normally operate and support structures and equipment are normally located.

MISSILE PROCEDURES TRAINER (MPT): The electronic, computerized simulator of the launch control center (LCC) where launch crews are trained and evaluated on their mission duties. The MPT includes (1) an operational, demounted LCC

unit (ICU) where the instructor/operator simulates status of the backup LCC, four transporter-erector launchers (TELs) and external communications.

MISSILE SUPPORT FACILITY: A missile or launcher production facility, repair, training, storage, and elimination facilities or test range.

NON-DEPLOYED MISSILE/LAUNCHER: An IRM/launcher located outside a deployment area.

RANGE: The maximum distance which can be covered by a missile in its standard design flying to fuel exhaustion.

SUPPORT EQUIPMENT: Unique vehicles and mobile or transportable equipment that support a deployed intermediate-range or shorter-range missile or launcher of such a missile. Includes full-scale inert training missiles, full-scale inert training missile stages, full-scale inert training launch canisters, and training launchers not capable of launching a missile.

TRAINING FACILITY: A facility, not at a missile operating base, at which personnel are trained in the use of intermediate-range or shorter-range missiles or launchers of such missiles and at which launchers of such missiles are located.

APPENDIX C

868 TMTG VEHICLE INVENTORY

VEHICLE	NUMBER	TACS	DISPOSITION
M.A.N. M-1013/1014	33	0	Redistribute back to USAFE for in theater use.
M.A.N. Wrecker M-1002	1	0	"
Operational LCCs	6	0	Strip of GLCM WCS unique gear, reissue as mobile comm center.
Operational TELs	9	0	Destroy IAW treaty.
DTV LCCs	4	0	Keep chassis for comm center van.
DTV TELs	8	0	Destroy IAW treaty.
M-35 2.5 ton cargo trk	4	4	Keep for TACS.
M-923/M-925 5 ton Cargo Trucks	25	6	Keep 6 of 25 for TACS, Redistribute within the USAF.
M-1026 HMMWV	57	4	Keep 4 of 57 for TACS instructors, Redistribute rest.
M-105 2.5 ton trailer	17	5	TACS keep 5 of 17, Redistribute rest.
M-149 Water trailer	12	4	TACS keep 4 of 12, Redistribute rest.
M-353 Hollingsworth Generator	6	3	TACS keep 3 of 6, Redistribute rest.
M-1009 CUCV Blazer	34	12	TACS keep 12 of 34.
Suburban, Carry-all	2	2	TACS keep both.

CONTINUED

A1B Fuel Trailer	1	1	TACS keep.
M-1008 CUCV Pickup	2	0	Redistribute within USAF.
Comm Relay Blazer	8	0	"
M-813 5 ton cargo truck	6	0	"
M-101 1.5 ton Comm Tlr	5	0	"
6-PAX 4x2	1	0	"
5-Ton Tractor	1	0	"
15-Ton Forklift	3	0	"
25 ft Trailer	1	0	"
6-PAX 4x4	1	0	"
1.5-ton Truck	1	0	"
Metro Van	1	0	"
Staff Car	1	0	"
M-416 .5 ton SP Tlr	38	0	Redistribute within USAF if needed, or to US Army.

Source: Vehicle inventory - Maj James Davidson, 868 TMMS/CC
TACS vehicle needs - Maj Bruce F. Queen, HQ TAC/DOYG

APPENDIX D

MANPOWER EXTRACTS FROM UNIT MANNING DOCUMENTS

Group Command Section

TITLE	RANK	AFSC	AUTHORIZED
Group Commander	Col	A0086	1
Deputy Commander	Lt Col	0086	1
Missile Safety Officer	Capt	X1835	1
Ground Safety NCO	MSgt	423XX	1
First Sergeant	MSgt	10099	1
Administrative Specialist	Civ	702XX	1
	MSgt	702XX	1
	SSgt	73250	1
	Sgt	73250	1
	A1C	702XX	1
Executive Officer	Lt	A7024	1
Command Section Summary		Officer	4
		Enlisted	6
		Civilian	1
		Total	11

CONTINUED

Curriculum Development Division

TITLE	RANK	AFSC	AUTHORIZED
Chief, TNG MGT DIV	Civ	7516	1
Superintendent TNG MGT	CMSgt	90200	1
Secretary	Civ	70250	1
WP Operator	Civ	70250	1
Staff Tng Branch			
GLCM Staff Inst	Capt	1835	3
GLCM Staff Inst	MSgt	411X0	1
TNG Development Branch			
CH, TNG DEV Branch	Major	1816	1
Inst Syst Develop Tech	MSgt	75173	1
	Sgt	75133	1
Admin Specialist	SSgt	702XX	1
	A1C	70230	1
Standardization Evaluation Branch			
Stan Eval Chief	Major	1816	1
Stan Eval Inst Ops	Capt	1835	1
Stan Eval Inst Comm	TSgt	30474	1
Stan Eval Inst Msl Tech	MSgt	411X1	1
	SSgt	411X1	1
Stan Eval Inst AGE	TSgt	423XX	1
Stan Eval Inst Vehicle	TSgt	472XX	1
Stan Eval Inst SF	MSgt	811XX	1
	SSgt	811XX	1

CONTINUED

TITLE	RANK	AFSC	AUTHORIZED
Instructional Resources Branch			
Chief, Inst Resources Br	Capt	1835	1
GLCM AGE Inst	TSgt	423XX	1
	Sgt	423XX	1
Inst Syst Devlop Tech	MSgt	75172	1
Curriculum Development Branch			
Curriculum Devel Inst	Capt	1835	3
Curriculum Devel Inst	TSgt	304XX	1
Curriculum Devel Inst	TSgt	41170	1
	TSgt	41171	1
Curriculum Devel Inst	TSgt	472XX	1
Curriculum Devel Inst	MSgt	811XX	1
	TSgt	811XX	1
	SSgt	811XX	1
Curriculum Development Division Summary		Officers	14
		Enlisted	29
		Civilian	4
		Total	47

CONTINUED

868 Tactical Missile Training Squadron

TITLE	RANK	AFSC	AUTHORIZED
Squadron Commander	Lt Col	A1816	1
Operations Officer	Lt Col	N1816	1
Superintendent of Tng	SMSgt	41199	1
Admin Specialist	SSgt	702XX	1
	Sgt	702XX	2
	A1C	702XX	1
	Civ	702XX	1

Dispersal Flight Training (DOF)

Ch Disp Tng	Major	1816	1
Ch, Flt Cmdr Tng	Major	1835	1
Technical/Dispersal Instructor Operations	Capt	1835	8
Tech/Disp/Inst Comm	TSgt	304XX	3
	SSgt	304XX	6
	Sgt	304XX	1
Tech/Disp/Inst Msl Tech	MSgt	41170	3
	TSgt	411X1	3
	TSgt	411X0	3
	SSgt	411X0	1
	Sgt	411X1	5
	Sgt	411X0	2
Tech/Disp/Inst AGE	MSgt	423XX	1
	TSgt	423X0	4
	SSgt	423XX	3
Tech/Disp/Inst Vehicle	TSgt	472XX	4
	SSgt	472XX	6
	Sgt	472XX	2

CONTINUED

TITLE	RANK	AFSC	AUTHORIZED
Tech/Disp/Inst SP	SMSgt	81199	1
	TSgt	811XX	11
	SSgt	811XX	10
	Sgt	811XX	5
Tech/Disp/Inst IDMT	MSgt	902XX	1
	TSgt	902XX	2
	SSgt	902XX	1
Supply Tech	TSgt	645XX	1
	Sgt	645XX	3

Operations Training and Scheduling (DOT/DOS)

Chief, Ops Tng	Major	1816	1
Ch, Ops Procedure Tng	Major	1816	1
Ch Emer Action Tng	Major	1816	1
Operations Inst	Capt	1835C	27
Admin Specialist	Sgt	702XX	1
	A1C	702XX	1
Tech/Disp/Inst Comm	TSgt	304XX	2
	SSgt	304XX	1
Tech/Disp/Inst MSL Tech	SSgt	411X0	3
	SSgt	411X1	2
Tech/Disp/Inst SP	MSgt	811XX	1
Training Scheduler	SSgt	39250	1
Development Tech Team	MSgt	E41170C	1
	TSgt	E411XXC	1

868 TMTS Summary		
	Officers	42
	Enlisted	101
	Civilian	1
	Total	144

CONTINUED

868 Tactical Missile Maintenance Squadron

TITLE	RANK	AFSC	AUTHORIZED
Sq Commander	Lt Col	A3116	1
Maintenance Supervision (MA)			
Chief MNX Supervision	Major	3116	1
Superintendent of MNX	CMSgt	41100	1
Admin Specialist	SSgt	702XX	2
	Sgt	702XX	1
	A1C	702XX	1
	Civ	702XX	1
Shop Maintenance and Vehicle Control (MAS & VCO)			
Chief, Shop MNX Branch	Major	3116	1
Admin Spec	Sgt	70250	1
Comm MNX Shop	TSgt	304XX	1
	SSgt	304XX	1
	Sgt	304XX	4
Missile MNX Shop	SMSgt	41199	1
	MSgt	411XO	1
	MSgt	411X1	1
	TSgt	411XO	4
	TSgt	411X1	2
	Sgt	411XO	3
	Sgt	411X1	2
	A1C	411XO	1
AGE MNX Shop	MSgt	423XX	1
	TSgt	423XX	2
	SSgt	423XX	1
	Sgt	423XX	4
	A1C	423XX	2
Corrosion Control	TSgt	427CXX	1
	SSgt	427CXX	3

CONTINUED

TITLE	RANK	AFSC	AUTHORIZED
M.A.N. Veh MNX	MSgt	472XX	1
	TSgt	472XX	4
	SSgt	472XX	4
	Sgt	472XX	1
	A1C	472XX	5
Vehicle Maintenance Operations (MAM & MOC)			
Chief, MNX OPS	Capt	3124C	1
Comm MNX	TSgt	304XX	3
	Sgt	304XX	2
MNX Scheduler	TSgt	39270	1
AGE MNX	SSgt	423XX	3
Missile MNX	MSgt	411X1	1
	MSgt	411XO	1
	TSgt	411XO	2
	SSgt	411XO	2
M.A.N. Veh MNX	Sgt	472XX	4
	A1C	472XX	13
Supply Specialist	MSgt	645XX	1
	TSgt	645XX	1
	SSgt	645XX	2
	Sgt	645XX	1
Quality Assurance (QA)			
Chief QA	Capt	3124C	1
Comm MNX	MSgt	304XX	1
AGE MNX	SSgt	423XX	1
Missile MNX	SMSgt	41199	1
	MSgt	411XO	1
	TSgt	411XO	1
	SSgt	411X1	1
M.A.N. Veh MNX	MSgt	472XX	1
	Sgt	472XX	1

CONTINUED

TITLE	RANK	AFSC	AUTHORIZED
Corrosion Control		42751	1
MNX SYST ANALY TECH	Sgt	391XX	1
868 TMMS Summary		Officer	5
		Enlisted	101
		Civilian	1
		Total	107

868 Student Squadron

TITLE	RANK	AFSC	AUTHORIZED
Sq Commander	Major	A1816	1
First Sgt	MSgt	10099	1
Personnel Specialist	MSgt	732XX	1
	Sgt	732XX	1
Admin Specialist	Sgt	702XX	1
868 Student Squadron Summary		Officer	1
		Enlisted	4
		Total	5

APPENDIX E

868 TMTG MANPOWER SUMMARY

NON-HARDLINE GLCM AFSC's

AFSC		NUMBER IN 868TH
0086	Commander	2
31XX	MSL MNX Officer	5
10099	First Sergeant	2
391XX	MNX Sys Analyses	1
392X0	Scheduler	2
427XX	Corrosion Control	5
645XX	Supply Mnx Tech	9
A7024	Executive Officer	1
702XX	Admn Specialist	21
732XX	Personnel Spec	4
7516	Education Spec	1
751XX	ISD Tech	3
90200	Superintendent	1
		62

CONTINUED

HARDLINE GLCM AFSC's

AFSC	NUMBER IN 868TH		EST NUMBER USAFE		AFSC TOTAL
18XX MSL Ops Officer	54	+	430	=	484
304XX Comm	27	+	280	=	307
411X0C Msl Sys Anal	35	+	247	=	282
423XX AGE	26	+	209	=	235
411X1C Msl Mech	23	+	184	=	207
472XX GLCM Vehicle Mnx	48	+	201	=	249
811XX SP	34	+	2157	=	2191
902XX IDMT	4	+	38	=	42
Officer	54	+	430	=	484
Enlisted	197	+	3316	=	3513
TOTAL	251	+	3746	=	3997

* The estimated USAFE numbers were calculated by taking the number of personnel USAFE required in the PMT and multiplying by the attrition/no-show rate for the past three years. This gave us an estimated number of personnel per AFSC currently in USAFE. The attrition/no-show rate is based upon the number of students that failed to arrive in theater for a variety of reasons. For Example: USAFE requires 100 GLCM Communications Specialists in a given quarter. Only 90 arrive for training as 10 were eliminated due to physical profiles, etc. Another 10 did not complete GLCM training. Of the original 100, only 80 field qualified technicians are present in theater. Thus, a 20% attrition/no-show rate. The attrition/no show rates for each hardline AFSC are: Missile Operations Officer 18XX = 1%, GLCM Communications Maintenance 304XX = 20%, GLCM Missile System Analysis 411XOC = 12%, GLCM AGE 423XX = 16%, GLCM Missile Mechanic 411X1C = 25%, GLCM Vehicle Maintenance 472XX = 23%, GLCM Security Police 811XX = 13%, GLCM IDMT 902XX = 47%.

APPENDIX F

SMALL ARMS WEAPONS INVENTORY

Equipment	Number	TACS
M-16 Rifles	440	50
M-16 MILES	200	50
M-15 .38 Revolvers	6	2
M-60 Machine Guns	25	0
M-60 MILES	20	0
M-203 Grenade Launcher	0	0
GAU-5A submachine guns	20	0

Source: Department of Defense, 868 TMTG/CC ltr, to DET 17 4400 MES, 22 July 87, and 868 TMTS table of allowances (TA).

APPENDIX G

DISPERSAL EQUIPMENT INVENTORY

Individual Equipment	On Hand	Needed For TACS
A-3 Bag	500	50
Web Belt	500	50
Suspenders	500	50
Ammo Pouches	1000	100
First Aid Pouches	1000	100
Pocket Knives	375	50
Ponchos	1000	100
Poncho Liners	400	50
Entrenching Tool w/Case	400	50
1 Qt Canteen w/Case	1000	100
2 Qt Canteen w/Case	500	50
Canteen Cups	500	50
Flashlights	500	50
Blank Adaptors	375	50
Water Proof Bags	1000	200
M-16 Cleaning Kits	400	50
Rucksacks w/frames	500	50
Sleeping Bags	500	50
Compass	500	50
Mattress	500	50
Tent Stakes	3500	350

CONTINUED

Tent Poles	2500		250
Rubber Boots	400	Pair, Assorted sizes	60
Wet Weather Parka & Pants	400	Pair, Assorted sizes	60
Hard Hats	50		0
M-16 Magazines	800		100
Shelter Halves	450		25

Field Equipment	On Hand		Needed For TACS
Fire Extinguishers	40		25
Pick w/Handle	70		10
Shovel	70		10
2 lb Hammer	140		20
Bow Saw	70		10
Axe	70		10
Mattock (digging tool)	70		10
Sharpening Stone	70		10
Crowbar	70		10
File w/Handle	70		10
Tie Down Straps	140		20
Rake	100		20
Propane Stoves	20		5
Propane Fuel (14 oz bottle)	300 900	summer winter	100 300
D Cell Batteries	500		250

CONTINUED

C Cell Batteries	250	50
AA Cell Batteries	100	25
9 Volt Batteries	200	0
32 Gallon Trash Can	20	5
Parachute Cord (Rolls)	30	5
Igloo Water Coolers	90	10
5 Gallon Water Cans	90	10
Green Glow Sticks (Boxes)	500	50
1000 Watt Generators	4	4
5 Gallon Fuel Cans	6	2
5 Man Tent	6	3
Field Desks	4	1
Brooms	10	3
Duct Tape (Rolls)	120	30
MX 300 Radios	120	30
MX 300 Radio Batteries	250	60
TEL Leveling Devices	12	0
SB-22 Switchboards	4	2
Sandbags	3000	300
Hydraulic Oil (Gallons)	5	5
15W40 Motor Oil (Gallons)	15	15
30W Motor Oil (Gallons)	15	15
Brake Fluid (Gallons)	5	5
Antifreeze (Gallons)	5	5
Trioxane Summer	20	5

CONTINUED

(Cases)	Winter	40	10
Field Phone Wire (Rolls)		60	10
Platoon Early Warning System		30 Sets	0
PEWS Wire (Rolls)		60	0
Rags (Bundles)		4	4